

ABSTRACT OF THE DISCLOSURE

An automatic gain controller for controlling gain values of an optical fiber amplifier. The automatic gain controller includes a first opto-electric conversion unit for converting a portion of optical signals that are input into the optical fiber amplifier
5 into electrical signals to output the converted electrical signals. A second opto-electric conversion unit converts a portion of output optical signals output from the optical fiber amplifier into electrical signals and then outputs the converted electrical signals. A transient suppressing unit generates pulse typed waveforms when a change in channel number is generated during monitoring outputs of the first opto-electric conversion unit,
10 and a comparing unit compares the sum of output signals of the transient suppressing unit and output signals of the first opto-electric conversion unit with output signals of the second opto-electric conversion unit. A control unit outputs pump control signals in response to the output signals of the transient suppressing unit and output signals of the comparing unit, and a first pumping light source unit supplies pumping light to the
15 optical fiber amplifier in response to the inputting of the pump control signals.